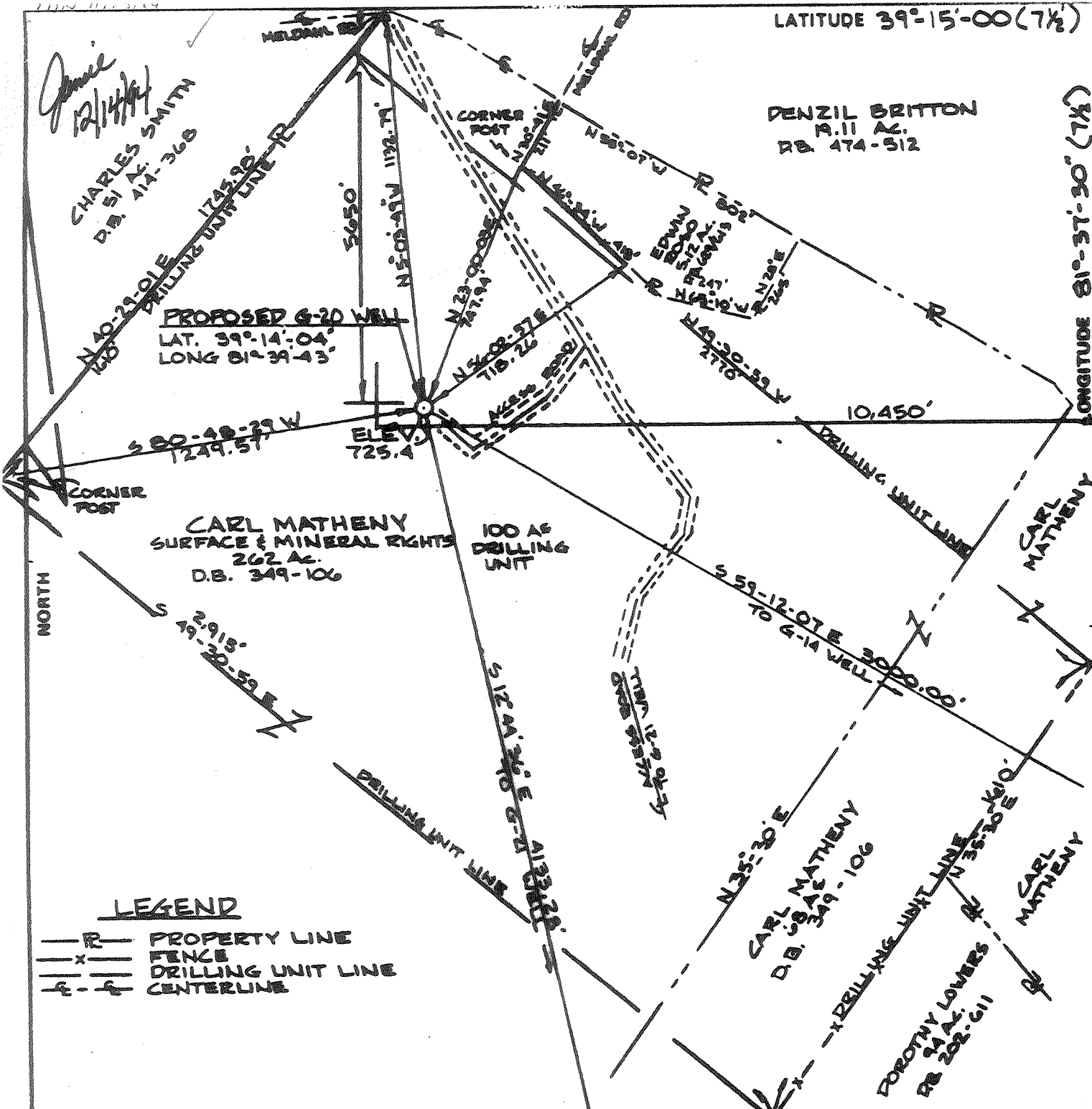


LATITUDE 39°-15'-00" (7 1/2')

DENZIL BRITTON
19.11 AC.
DB. 474-512

James
12/14/84
CHARLES SMITH
D.B. 414-368

LONGITUDE 81°-37'-30" (7 1/2')



PROPOSED G-20 WELL
LAT. 39°-14'-04"
LONG 81°-39'-43"

CORNER POST
ELEV. 725.4
CARL MATHENY
SURFACE & MINERAL RIGHTS
262 AC.
D.B. 349-106

100 AC
DRILLING
UNIT

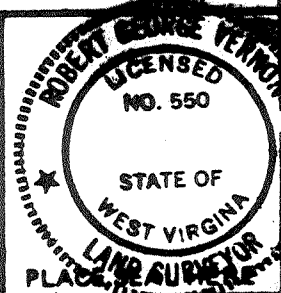
LEGEND

- R — PROPERTY LINE
- X — FENCE
- — — DRILLING UNIT LINE
- - - CENTERLINE

OUR PROJECT NO. 84-2299

FILE NO. _____
 DRAWING NO. _____
 SCALE 1" = 400'
 MINIMUM DEGREE OF ACCURACY 1"/32,000
 PROVEN SOURCE OF ELEVATION U.S.G.S.
BENCHMARK

I THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE REGULATIONS ISSUED AND PRESCRIBED BY THE DEPARTMENT OF MINES.
 (SIGNED) [Signature]
 R.P.E. _____ L.L.S. \$550

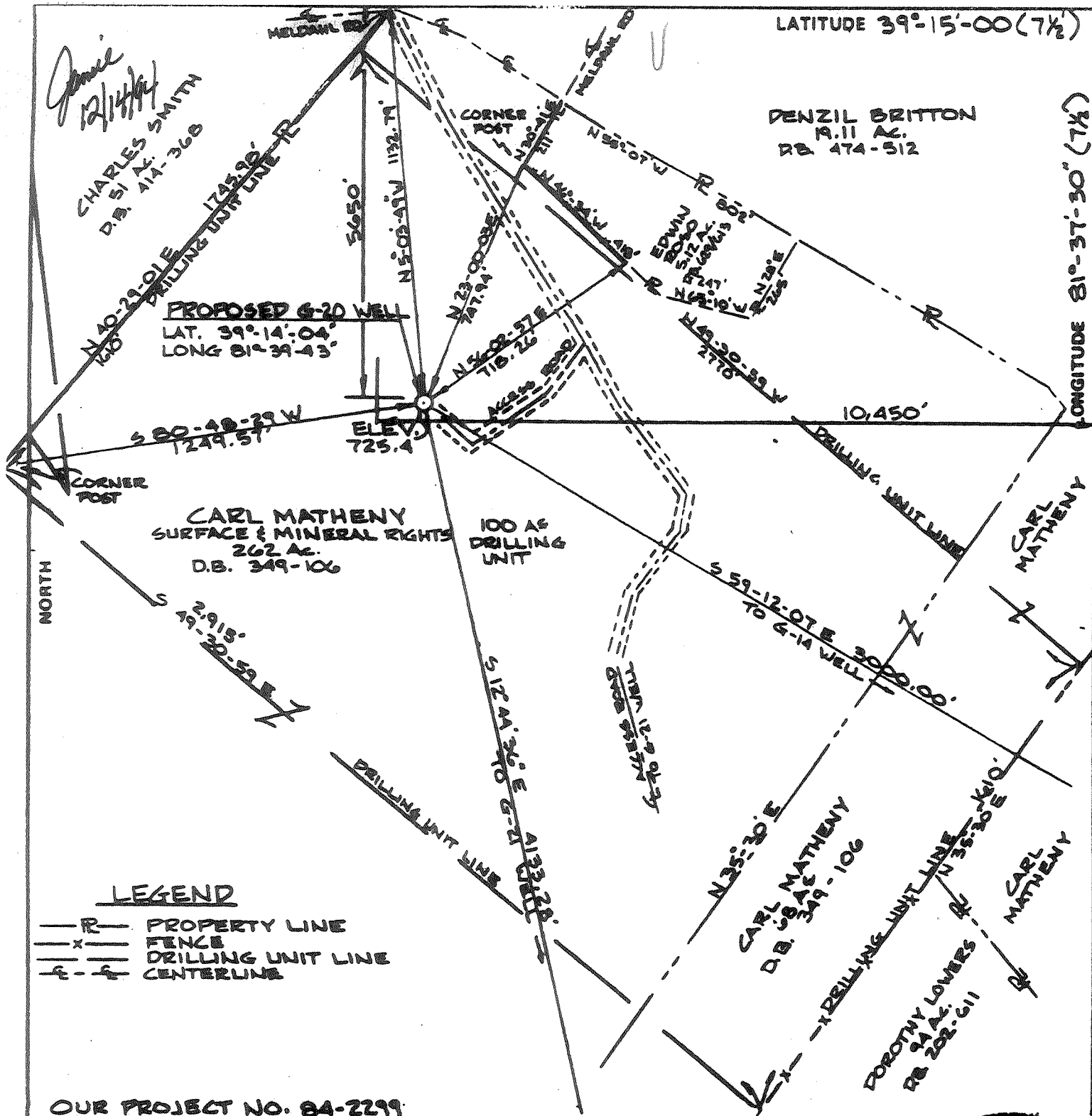


STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
OIL AND GAS DIVISION



DATE October 18th, 1984.
 OPERATOR'S WELL NO. G-20
 API WELL NO. 47-107-1330 P
 STATE COUNTY PERMIT

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS
 WELL TYPE: OIL GAS LIQUID INJECTION _____ WASTE DISPOSAL _____
 (IF "GAS,") PRODUCTION _____ STORAGE _____ DEEP SHALLOW _____
 LOCATION: ELEVATION 725.4 WATERSHED SANDY CREEK (A TRIBUTARY OF THE OHIO RIVER)
 DISTRICT LUBECK COUNTY WOOD
 QUADRANGLE LUBECK, W.VA-OHIO (7.5 MINUTE)
 SURFACE OWNER CARL MATHENY ACREAGE 262 AC.
 OIL & GAS ROYALTY OWNER SEE ABOVE SURVEY LEASE ACREAGE _____
 LEASE NO. _____
 PROPOSED WORK: DRILL CONVERT _____ DRILL DEEPER _____ REDRILL _____ FRACTURE OR STIMULATE _____ PLUG OFF OLD FORMATION _____ PERFORATE NEW FORMATION _____ OTHER PHYSICAL CHANGE IN WELL (SPECIFY) _____
 PLUG AND ABANDON _____ CLEAN OUT AND REPLUG _____
 TARGET FORMATION ORISKANY ESTIMATED DEPTH 4500' (T ORISK)
 WELL OPERATOR E.I. DuPONT DE NEMOURS DESIGNATED AGENT Craig K. Dillon
 ADDRESS P.O. Box 1217 ADDRESS CO/E.I. DuPONT DE NEMOURS
PARKERSBURG, W.VA. 26102 P.O. Box 1217, PK86, W.VA. 26102



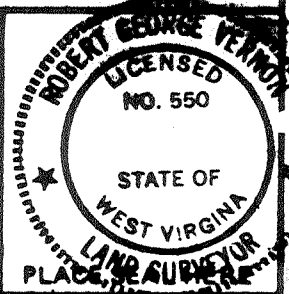
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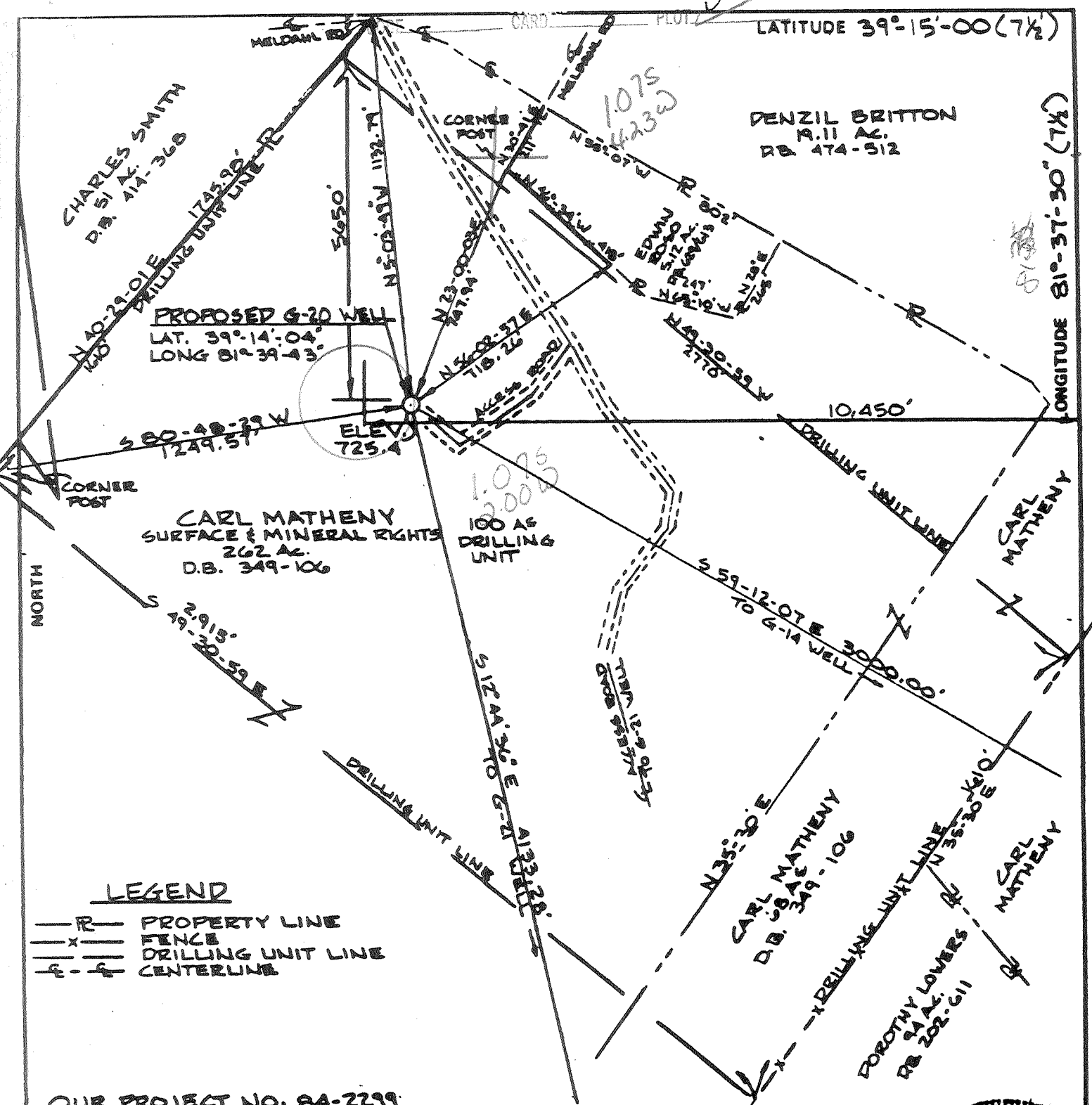


STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES
 OIL AND GAS DIVISION



DATE October 18th, 1984.
 OPERATOR'S WELL NO. G-20
 API WELL NO. 47-107-1330 P
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 WELL TYPE: OIL GAS LIQUID INJECTION _____ WASTE DISPOSAL _____
 (IF "GAS,") PRODUCTION _____ STORAGE _____ DEEP SHALLOW _____
 LOCATION: ELEVATION 725.4 WATER SHED SANDY CREEK (A TRIBUTARY OF THE OHIO RIVER)
 DISTRICT LUBECK COUNTY WOOD
 QUADRANGLE LUBECK, W.VA-OHIO (7.5 MINUTE)
 SURFACE OWNER CARL MATHENY ACREAGE 262 AC.
 OIL & GAS ROYALTY OWNER SEE ABOVE SURVEY LEASE ACREAGE _____
 LEASE NO. _____
 PROPOSED WORK: DRILL CONVERT _____ DRILL DEEPER _____ REDRILL _____ FRACTURE OR STIMULATE _____ PLUG OFF OLD FORMATION _____ PERFORATE NEW FORMATION _____ OTHER PHYSICAL CHANGE IN WELL (SPECIFY) _____
 PLUG AND ABANDON _____ CLEAN OUT AND REPLUG _____
 TARGET FORMATION ORISKANY ESTIMATED DEPTH 4500' (T/O RISK)
 WELL OPERATOR E.I. DuPONT DE NEMOURS DESIGNATED AGENT CRIG K. DILLON
 ADDRESS P.O. Box 1217 ADDRESS Co/E.I. DuPONT DE NEMOURS
PARKERSBURG, W.VA. 26102 P.O. Box 1217, PKBG, W.VA. 26102



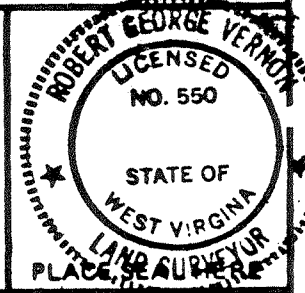
LEGEND

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OUR PROJECT NO. 84-2299

FILE NO. _____
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 SCALE 1" = 400'
 MINIMUM DEGREE OF ACCURACY 1/32,000
 PROVEN SOURCE OF ELEVATION U.S.G.S.
BENCHMARK

I THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE REGULATIONS ISSUED AND PRESCRIBED BY THE DEPARTMENT OF MINES.
 (SIGNED) [Signature]
 R.P.E. _____ L.I.S. \$550



STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES
 OIL AND GAS DIVISION



DATE October 18th, 1984.
 OPERATOR'S WELL NO. G-20
 API WELL NO. 47-107-1330
 STATE COUNTY PERMIT

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS
 WELL TYPE: OIL GAS LIQUID INJECTION _____ WASTE DISPOSAL _____
 (IF "GAS,") PRODUCTION _____ STORAGE _____ DEEP SHALLOW _____
 LOCATION: ELEVATION 725.4 WATER SHED SANDY CREEK (A TRIBUTARY OF THE OHIO RIVER)
 DISTRICT LUBECK COUNTY WOOD
 QUADRANGLE LUBECK, W.VA-OHIO (7.5 MINUTE) Bellville 151 NE2
 SURFACE OWNER CARL MATHENY ACREAGE 262 AC.
 OIL & GAS ROYALTY OWNER SEE ABOVE SURVEY LEASE ACREAGE _____
 LEASE NO. _____
 PROPOSED WORK: DRILL CONVERT _____ DRILL DEEPER _____ REDRILL _____ FRACTURE OR STIMULATE _____ PLUG OFF OLD FORMATION _____ PERFORATE NEW FORMATION _____ OTHER PHYSICAL CHANGE IN WELL (SPECIFY) _____
 PLUG AND ABANDON _____ CLEAN OUT AND REPLUG _____
 TARGET FORMATION ORISKANY ESTIMATED DEPTH 4500' (T/ORISK.)
 WELL OPERATOR E.I. DuPONT DE NEMOURS DESIGNATED AGENT PHILLIP M. SHANNON
 ADDRESS P.O. Box 1217 ADDRESS CO/E.I. DuPONT DE NEMOURS
239 PARKERSBURG, W.VA. 26102 P.O. Box 1217, PKB6, W.VA. 26102

JAN 7 1985



1) Date: Sept. 5, 19 84
 2) Operator's Well No. DuPont G-20
 3) API Well No. 47 -107 - 1330
 State _____ County _____ Permit _____

STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES, OIL AND GAS DIVISION
APPLICATION FOR A WELL WORK PERMIT

- 4) WELL TYPE: A Oil _____ / Gas X /
 B (If "Gas", Production X / Underground storage _____ / Deep X / Shallow _____)
- 5) LOCATION: Elevation: 725.4 Watershed: Sandy Creek/Ohio River
 District: Lubeck County: Wood Quadrangle: Lubeck WV-Ohio (7.5 minute)
- 6) WELL OPERATOR E.I. duPont de Nemours & Co., Inc. 7) DESIGNATED AGENT P.M. Shannon/co E.I. du Pont
 Address P.O. Box 1217 Address P.O. Box 1217
Parkersburg, WV 26102 Parkersburg, WV 26102
- 8) OIL & GAS INSPECTOR TO BE NOTIFIED Name _____ Address _____
 9) DRILLING CONTRACTOR: Name _____ Address _____
- 10) PROPOSED WELL WORK: Drill X / Drill deeper _____ / Redrill _____ / Stimulate X /
 Plug off old formation _____ / Perforate new formation _____
 Other physical change in well (specify) _____
- 11) GEOLOGICAL TARGET FORMATION, Oriskany Sandstone
 12) Estimated depth of completed well, 4500 feet
 13) Approximate strata depths: Fresh, 50 feet; salt, _____ feet.
 14) Approximate coal seam depths: None Is coal being mined in the area? Yes _____ / No X

15) CASING AND TUBING PROGRAM

| CASING OR TUBING TYPE | SPECIFICATIONS | | | | | FOOTAGE INTERVALS | | CEMENT FILL-UP OR SACKS (Cubic feet) | PACKERS |
|-----------------------|----------------|-------|----------------|-----|------|-------------------|--------------|--------------------------------------|---|
| | Size | Grade | Weight per ft. | New | Used | For drilling | Left in well | | |
| Conductor | 11 3/4" | H-40 | 42 | X | | 250' | 250' | 125sxs (surf) | RECEIVED NOV 27 1984 DEPT. OF MINES, OIL & GAS DIV. DEPT. OF MINES, OIL & GAS DIV. |
| Fresh water | | | | | | | | | |
| Coal | | | | | | | | | |
| Intermediate | 8 5/8" | K-55 | 24 | X | | 2100' | 2100' | 380sxs (surf) | |
| Production | 5 1/2" | K-55 | 15.5 | X | | 4500' | 4500' | 180sxs (TOC=300) | |
| Tubing | 2 3/8" | J-55 | 4.6 | X | | 4200' | 4200' | | |
| Liners | | | | | | | | | |

NOTE: All cmt. volumes include 25% excess factors

OFFICE USE ONLY
 DRILLING PERMIT

Permit number 47-107-133 0 Date December 17, 19 84

This permit covering the well operator and well location shown below is evidence of permission granted to drill in accordance with the pertinent legal requirements subject to the conditions contained herein and on the reverse hereof. Notification must be given to the District Oil and Gas Inspector. (Refer to No. 8) Prior to the construction of roads, locations and pits for any permitted work. In addition, the well operator or his contractor shall notify the proper district oil and gas inspector 24 hours before actual permitted work has commenced.)

The permitted work is as described in the Notice and Application, plat, and reclamation plan, subject to any modifications and conditions specified on the reverse hereof.
 Permit expires December 17, 1986 unless well work is commenced prior to that date and prosecuted with due diligence.

| | | | | |
|-----------------|------------------|-----------------|-------------------|-----------------------|
| Bond: <u>56</u> | Agent: <u>MW</u> | Plat: <u>MW</u> | Casing: <u>MW</u> | Fee: <u>319-40681</u> |
|-----------------|------------------|-----------------|-------------------|-----------------------|

Margaret J. Rasse
 Administrator, Office of Oil and Gas

NOTE: Keep one copy of this permit posted at the drilling location.



RECEIVED
AUG 15 1985

RECEIVED
JUL 30 1985

DEPARTMENT OF OIL & GAS
CONSERVATION COMMISSION

State of West Virginia
Department of Mines
Oil and Gas Division

DIVISION OF OIL & GAS
DEPARTMENT OF ENERGY
Date July 12, 1985
Operator's
Well No. 3 G-20
Farm Matheny
API No. 47 - 107 - 1330

WELL OPERATOR'S REPORT
OF
DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

WELL TYPE: Oil ___ / Gas x / Liquid Injection ___ / Waste Disposal ___ /
(If "Gas," Production ___ / Underground Storage ___ / Deep ___ / Shallow ___ /)

LOCATION: Elevation: 737 KB / 725 GL Watershed Sandy Creek/Ohio River
District: Lubeck County Wood Quadrangle Lubeck WV-Ohio (7.5 minute)

COMPANY E. I. du Pont de Nemours & Co. Inc.
ADDRESS P. O. Box 1217, Parkersburg, WV 26101
DESIGNATED AGENT Peter B. Vining
ADDRESS Same
SURFACE OWNER Darrel Matheny
ADDRESS Rt. 1, Box 285, Washington, WV 26181
MINERAL RIGHTS OWNER Same
ADDRESS _____
OIL AND GAS INSPECTOR FOR THIS WORK _____
G. P. Robinson ADDRESS Mineral Wells, WV
PERMIT ISSUED November 29, 1984
DRILLING COMMENCED April 3, 1985
DRILLING COMPLETED May 16, 1985
IF APPLICABLE: PLUGGING OF DRY HOLE ON
CONTINUOUS PROGRESSION FROM DRILLING OR
REWORKING. VERBAL PERMISSION OBTAINED
ON _____

| Casing Tubing | Used in Drilling | Left in Well | Cement fill to Cu. ft. |
|------------------------|---------------------|-----------------|------------------------------|
| Size 20-16 Cond. | | | |
| 11 3/4" | 250 | 250 | To Surf. |
| 9 5/8 | | | |
| 8 5/8 | 2095 | 2095 | To Surf. |
| 7 | | | |
| 5 1/2 | 4498 | 4498 | 225 Sks. |
| 4 1/2 | | | |
| 3 | | | |
| 2 -3/8" | 4018 | 4018 | Tubing |
| Liners used | | | |

GEOLOGICAL TARGET FORMATION Oriskany Sandstone Depth 4500 feet
Depth of completed well 4499/4411 feet Rotary X / Cable Tools _____
Water strata depth: Fresh _____ feet; Salt _____ feet
Coal seam depths: None reported Is coal being mined in the area? No

OPEN FLOW DATA

Producing formation Oriskany Pay zone depth 4286-4292 KB feet
Gas: Initial open flow 25 Mcf/d Oil: Initial open flow - Bbl/d
Final open flow 80 Mcf/d Final open flow - Bbl/d
Time of open flow between initial and final tests 4 hours
Static rock pressure 1500 psig (surface measurement) after 4 hours shut in
(If applicable due to multiple completion--)
Second producing formation _____ Pay zone depth _____ feet
Gas: Initial open flow _____ Mcf/d Oil: Initial open flow _____ Bbl/d
Final open flow _____ Mcf/d Oil: Final open flow _____ Bbl/d
Time of open flow between initial and final tests _____ hours
Static rock pressure _____ psig (surface measurement) after _____ hours shut in

(Continue on reverse side)

DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC.

Perforated 4286-4292 (Oriskany) acidized w/500 gallons 15% HCl (25 MCFPD)

WELL LOG

| FORMATION | COLOR | HARD OR SOFT | TOP FEET | BOTTOM FEET | REMARKS | | | | | | | | | | | | | | | | | | | | | |
|---------------------|-------|--------------|----------|-------------|--|-----------|-----|-----------|---------------------|------|------|-----------|------|-----|------|------|-----|--------|------|-----|------------|------|-----|-----------------|------|----|
| | | | | | Including indication of all fresh and salt water, coal, oil and gas | | | | | | | | | | | | | | | | | | | | | |
| Surface Soil | | | 0 | 20 | | | | | | | | | | | | | | | | | | | | | | |
| Shale | | | 20 | 210 | | | | | | | | | | | | | | | | | | | | | | |
| Sandstone | | | 210 | 245 | | | | | | | | | | | | | | | | | | | | | | |
| Shale | | | 245 | 380 | | | | | | | | | | | | | | | | | | | | | | |
| Sandstone | | | 380 | 440 | | | | | | | | | | | | | | | | | | | | | | |
| Shale and Sand | | | 440 | 1470 | | | | | | | | | | | | | | | | | | | | | | |
| Sandstone | | | 1470 | 1620 | | | | | | | | | | | | | | | | | | | | | | |
| Shale and Silt | | | 1620 | 4190 | | | | | | | | | | | | | | | | | | | | | | |
| Limestone | | | 4190 | 4280 | | | | | | | | | | | | | | | | | | | | | | |
| Sandstone | | | 4280 | 4340 | Oriskany | | | | | | | | | | | | | | | | | | | | | |
| Limestone | | | 4340 | 4500 | T.D. | | | | | | | | | | | | | | | | | | | | | |
| | | | | | <p><i>Helderberg @ TD</i></p> <table border="1"> <thead> <tr> <th>Formation</th> <th>Top</th> <th>Thickness</th> </tr> </thead> <tbody> <tr> <td>Apr. Cav. Undivided</td> <td>1930</td> <td>1150</td> </tr> <tr> <td>Low Huron</td> <td>3080</td> <td>525</td> </tr> <tr> <td>Town</td> <td>3605</td> <td>140</td> </tr> <tr> <td>Angels</td> <td>3745</td> <td>220</td> </tr> <tr> <td>Blueschist</td> <td>3965</td> <td>175</td> </tr> <tr> <td>Cochran's Shale</td> <td>4140</td> <td>50</td> </tr> </tbody> </table> | Formation | Top | Thickness | Apr. Cav. Undivided | 1930 | 1150 | Low Huron | 3080 | 525 | Town | 3605 | 140 | Angels | 3745 | 220 | Blueschist | 3965 | 175 | Cochran's Shale | 4140 | 50 |
| Formation | Top | Thickness | | | | | | | | | | | | | | | | | | | | | | | | |
| Apr. Cav. Undivided | 1930 | 1150 | | | | | | | | | | | | | | | | | | | | | | | | |
| Low Huron | 3080 | 525 | | | | | | | | | | | | | | | | | | | | | | | | |
| Town | 3605 | 140 | | | | | | | | | | | | | | | | | | | | | | | | |
| Angels | 3745 | 220 | | | | | | | | | | | | | | | | | | | | | | | | |
| Blueschist | 3965 | 175 | | | | | | | | | | | | | | | | | | | | | | | | |
| Cochran's Shale | 4140 | 50 | | | | | | | | | | | | | | | | | | | | | | | | |

(Attach separate sheets as necessary)

E. I. du Pont de Nemours & Co. Inc.

Well Operator

By: *[Signature]* (Designated Agent)

Date: July 12, 1985

Note: Regulation 2.02(i) provides as follows:

"The term 'log' or 'well log' shall mean a systematic detailed geological record of all formations, including coal, encountered in the drilling of a well."